

NWS Corpus Christi, TX

2010 Spring Edition

Victoria Becomes First Texas Coastal StormReady County

By John Metz — Warning Coordination Meteorologist

The City of Victoria and County Office of Emergency Management worked diligently for the past year to achieve StormReady recognition and was officially commemorated on Feb 26, 2010. This marks the first StormReady County on the Texas coast and the 84th Storm-Ready community in Texas. Storm-Ready is a nationwide community preparedness program that uses a grassroots approach to help communities develop plans to handle all types of severe weather - from tornadoes to tsunamis. The program encourages communities to take a new, proactive approach to improving local hazardous weather operations by providing emergency managers with clear-cut guidelines on how to improve their hazardous weather operations.

To be officially StormReady, a community must:

- Establish a 24-hour warning point for hazardous weather.
- ♦ Have multiple ways to receive notification and alert the public of severe weather warnings and forecasts.
- Create a system that monitors weather conditions locally.
- Promote the importance of public readiness through community seminars.
- ♦ Develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.
- Pass a site-visit conducted by the National Weather Service.

StormReady doesn't mean storm proof. StormReady communities are better prepared to save lives from the onslaught of severe weather through better planning, education and awareness. Communities have fewer fatalities and property damage if they plan before dangerous weather arrives. No community is storm proof, but Storm-Ready can help communities save lives.

Victoria exceeded the requirements needed to obtain StormReady Recognition by establishing multiple means of disseminating NWS Warning information to the community. Congratulations Victoria Office of Emergency Management for this most outstanding achievement and your dedication to public safety!

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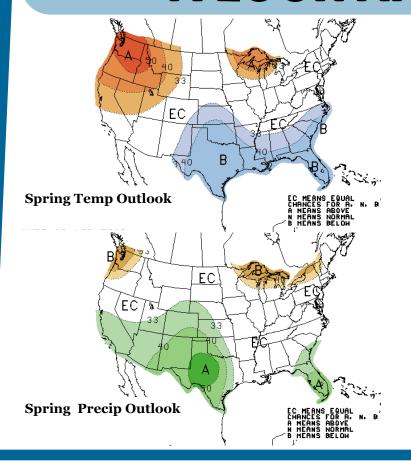
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StormReady

Left: StormReady Presentation Ceremony. Pictured L-R Scott Cordero—Meteorologist in Charge NWS Corpus Christi, John Metz— Warning Coordination Meteorologist NWS Corpus Christi, County Judge Donald Pozzi—Victoria County, Mayor Will Armstrong— City of Victoria







Average Spring Temperatures

Average Highs in April range from near 80 in Victoria to near 90 in Laredo. Lows in April average in the Low 60s.

Average Precipitation Jan-May

Victoria: 14.82"

Corpus Christi: 10.73"

Laredo: 6.90"

Hail Size Criterion Increases for Severe Thunderstorms

By Jason Runyen-Forecaster / Storm Data Program Leader

Previously, the National Weather Service issued Severe Thunderstorm Warnings whenever a thunderstorm was forecast to produce wind gusts to 58 miles per hour (50 knots) or greater and/or hail size 3/4 inch (penny-size) diameter or larger. For the past few years, offices that cover areas of Kansas experimented using a warning criterion of one inch diameter hail. During the spring and early summer of 2009, this experiment expanded to other areas in the Central and Western U.S. Beginning January 5, 2010, the minimum size for severe hail nationwide increased to one inch (quarter-size) diameter. No change was made to the wind gust criterion of 58 mph.

This change is based on research indicating significant damage does not occur until hail size reaches 1 inch (quarter-size) in diameter, and as a response to requests by core partners in emergency management and the media. Particularly in



areas of the Central U.S., the frequency of severe thunderstorm warnings issued for penny-size and nickel size hail might have desensitized the public to take protective action during a severe thunderstorm warning.

In areas that experimented with changing to the one inch hail criterion, media partners stated their user feedback suggests warnings are now more meaningful. In addition, television networks receive fewer viewer complaints from breaking into programming for non-damaging storms. The Emergency Management community in those areas agreed that warnings carry more weight, and spotters now concentrate on the more significant events.

DID YOU KNOW?

SEVERE WEATHER EDITION



Above: Corpus Christi F2 tornado on October 24, 2002

South Texas Averages Almost 7 Tornadoes Per Year.

In 1902, one of the most deadliest tornadoes in Texas struck Goliad. This F4 tornado killed 114 people.

In 1905, a tornado killed 21 people in Laredo and Nuevo Laredo, Mexico. The tornado collapsed two spans of the International Bridge into the Rio Grande River

In 2002, an F2 tornado struck Corpus Christi killing one person and causing over \$75 million in damage.

Below: Grapefruit size hail that fell in Oilton, TX on April 30, 2007

On June 2, 2003 a supercell struck Laredo, producing golfball size hail and 95 mph winds, and causing \$33 million in damage.

On May 8, 2005 a severe thunderstorm produced 2" hail in Corpus Christi. This was only the third time since 1950 that hail 2" or greater has been reported in Nueces County.

The largest hail stone ever recorded in the U.S. fell in Aurora, NE and measured 7" in diameter!





A LOOK BACK

The Historic South Texas Drought Finally Ends

By Greg Wilk-Hydrology/Drought Program Leader

After over two years where at least a portion of South Texas was in moderate drought status or worse, drought conditions no longer exist for any portion of South Texas. This historic drought was gradually alleviated due to strong El-Nino conditions which developed during the summer of 2009. The El-Nino, defined as warmer than normal temperatures over the eastern Pacific Ocean, provided South Texas with a wetter than normal (and cooler than normal) autumn and winter. However, since the first several months of 2009 were exceptionally dry, it took several months of above normal rainfall to bring the drought to an end.

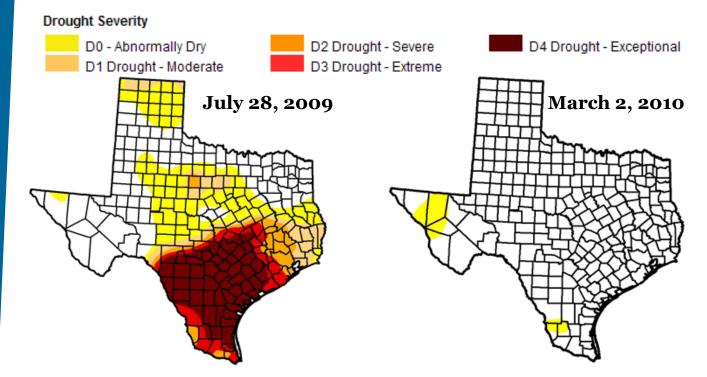
Most areas in South Texas saw drought conditions begin as early as mid January 2008, as La Nina conditions remained over the eastern Pacific Ocean (La Nina is the opposite of El-Nino; thus South Texas tends to be warmer and drier than normal). While drought conditions improved in some locations and worsened in others from time to time during the year, at least a portion of South Texas was considered to be in drought through 2008. Many locations saw some relief in the summer of 2008, when Hurricane Dolly made landfall in Deep South Texas. However, by the end of 2008 most of the area was in at least a moderate drought, with the worst conditions in northern portions of Goliad and Victoria counties where extreme drought conditions were observed.

Conditions only worsened during the first several months of 2009, as rainfall became scarce and overall tempera-

tures remained above normal. By the beginning of March, the Victoria Crossroads area and most of the northeastern Coastal Bend was in exceptional drought status (the highest drought status possible). By the end of April, all of the Coastal Bend (including Corpus Christi) was in exceptional drought status. Most South Texas farmers had already given up on having a successful growing season; in fact many did not bother to plant that year. Ranchers, who previously were feeding their cattle hay and other supplements (due to the depleted grazing areas), had to sell off much (if not all) of their herds.

Drought conditions peaked in late August, as nearly the entire region was in exceptional drought status, with only most of Webb, La Salle and McMullen counties experiencing extreme drought conditions. Due to low flows on the Guadalupe River, the city of Victoria imposed mandatory water restrictions, forcing residents to conserve water. On top of that, the summer of 2009 turned out to be one of the warmest on record, with several record highs reached or exceeded at Corpus Christi and Victoria. By the end of August, 36 record highs were either equaled or exceeded at Corpus Christi for the entire year, with 13 records matched or broken at Victoria. What made matters worse, is that the developing El-Nino conditions curtailed the tropical weather season for South Texas, not only limiting tropical storm and hurricane development, but at times even limiting tropical waves from impacting the area.

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A LOOK BACK

(Continued from page 4)

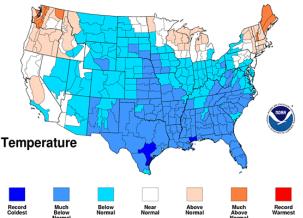
Drought relief began in September 2009, as El-Nino conditions finally began to impact the area, and cold fronts began to move into South Texas. Drought conditions first improved over the Laredo area and western Brush Country, then over the Victoria area and northern Coastal Bend. Conditions continued to improve over most of South Texas as summer turned into fall, with the drought ending at Victoria and Laredo near the end of November. On the other hand, exceptional drought conditions remained over all of Nueces County (including Corpus Christi) through mid November, due to the very high rainfall deficits accumulated over many months. However, occasional moderate to heavy rainfall events finally helped to bring the deficits down sufficiently through the end of the year. By the end of 2009, only Nueces county and portions of Kleberg and Jim Wells counties were in severe drought, with most of the northern half of South Texas considered to be out of the drought. Still, it took several more rain events in 2010 for all of South Texas to finally be considered drought-free. By February 16, 2010 all of South Texas (in fact all of Texas) was considered to be drought-free.

Although our drought is over, you can keep informed on other areas in the United States experiencing drought by visiting our Drought Page. Simply click on the drought icon near the bottom of our home page, or type: http://www.srh.noaa.gov/crp/?n=drought.

Our drought page includes the latest Drought Monitor product as well as the Drought Outlook. Several useful links are also provided to keep you informed on drought impacts across the U. S. or other portions of Texas, weather outlooks from the Climate Prediction Center, and other useful links. Thus, you can still use our drought page even when South Texas is free from drought. Still, be assured that, once drought conditions impact a notable area of the Coastal Bend, Victoria area or Rio Grande Plains of South Texas, the National Weather Service in Corpus Christi will keep you informed on the drought's current status, its impacts, as well as its potential to improve (or worsen) as the months progress.

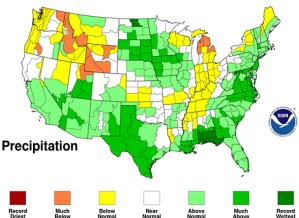
Dec 2009 - Feb 2010 Divisional Ranks

National Climatic Data Center/NESDIS/NOAA



Dec 2009 - Feb 2010 Divisional Ranks

National Climatic Data Center/NESDIS/NOAA



2009-2010 SOUTH TEXAS WINTER FAST FACTS

- 6TH COLDEST WINTER ON RECORD IN CORPUS CHRISTI WITH AN AVERAGE TEMPERATURE OF 53.6 DEGREES F.
- 2ND COLDEST WINTER ON RECORD IN VICTORIA WITH AN AVER-AGE TEMPERATURE OF 50.7 DEGREES F.
- 7TH WETTEST WINTER ON RECORD IN CORPUS CHRISTI WITH
 11.14 INCHES OF RAINFALL
- ◆ 7TH WETTEST WINTER ON RECORD IN VICTORIA WITH 9.94



COOP CORAL



2010 Coop Rainfall Totals to Date (Jan — Feb)



Alice Intl Arpt	3.74"
Aransas Wildlife Refuge	8.82"
Beeville 5 NE	7.76"
Benavides #2	5.26"
Bishop	8.11"
Calliham	5.19"
Choke Canyon Dam	7.21"
Coleto Creek Reservoir	5.72"
Corpus Christi Intl Arpt	7.18"
CC Botanical Gardens	8.92"
Cotulla	6.04"
Cross	5.91"
Fowlerton	6.26"

George West 2 SSW	7.70"
Goliad	6.06"
Kingsville	8.19"
Laredo #2	3.49"
Loma Alta	5.10"
Los Angeles 4 WSW	6.64"
Mathis 4 SSW	7.59"
Padre Island Seashore	7.42"
Port Aransas	12.04"
Port Lavaca	9.21"
Port O'Connor	17.35"
Refugio 3 SW	8.27"

Refugio 2 NW	8.95"
Robstown	8.27"
Rockport	11.17"
Sinton	7.33"
Three Rivers 8 NE	6.32"
Tilden 10 S	5.34"
Tilden 4 SSE	6.07"
Tynan	8.96"
Victoria Fire Dept #5	7.00"
Victoria Regional Arpt	6.22"
Welder Wildlife Refuge	8.60"
Whitsett	7.00"

The Wind of Change

By Tony Merriman-Forecaster

The COOP program went through quite a few changes during the recent autumn and winter months. The first modification to the program was the deployment of new equipment in the field. Five Fischer & Porter punch-tape rain gauges were upgraded to the Fischer & Porter replacements (FPRs) in September. Hourly precipitation data (HPD) are now recorded within the internal memory of the FPRs and the observers download the data onto a memory card. This new feature allows for an easier rainfall data retrieval process for the observers as opposed to the old way of having to remove the punch tape from the old system.

The second change to the program was the transition of personnel responsible for the supervision of the COOP program. Larry Maifeld vacated the Observations Program Leader (OPL) position due to retirement in October. Forecaster Tony Merriman temporarily took over the responsibilities of supervising the COOP program until Larry's permanent replacement was selected. Douglas Vogelsang was promoted to the OPL position and assumed permanent responsibility of the COOP program in February. We would like to thank all the COOP observers for their patience and understanding during the transition period from October 2009 through February 2010. Tony enjoyed the privilege of meeting and working with a handful of our great COOP observers during the past few months. Keep up the great work!



What is the Coop Program?

The NWS Cooperative Observer Program (COOP) is truly the Nation's weather and climate observing network of, by and for the people. More than 11,000 volunteers take observations on farms, in urban and suburban areas, National Parks, seashores, and mountaintops. The data are truly representative of where people live, work and play. The COOP was formally created in 1890 under the Organic Act. Its mission is two-fold:

- ◆ To provide observational meteorological data, usually consisting of daily maximum and minimum temperatures, snowfall, and 24-hour precipitation totals, required to define the climate of the United States and to help measure long-term climate changes
- To provide observational meteorological data in near real-time to support forecast, warning and other public service programs of the NWS.



MARINER'S PORT

Spring Time Means Windy Times for South Texas

By Michael Gittinger-Senior Forecaster / Marine Program Leader

If you have lived in this region for any length of time, you know that spring time means windy times for South Texas. Although the strongest wind speeds of the year typically come from strong cold fronts passing through the region during the late fall, winter and early spring, it's the consistently strong south and southeast winds that give the Coastal Bend a reputation for being a windy place. If you ask most residents of South Texas what is the windiest month of the year and most will say March or April, but ask an experienced mariner and he will likely tell you it is May. Actually, they are both right.

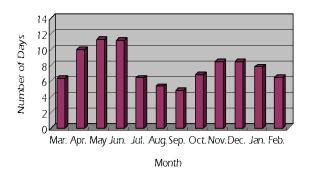
During the spring, jet streams in the upper levels of the atmosphere remain near their strongest levels (over 150 mph at times). These jet streams interact with the Rocky Mountain to induce persistent low pressure at the surface and lower levels of the atmosphere across the southern, central and northern plains. Meteorologists call this phenomena lee-side cyclogenesis. South Texas lies between these low pressure centers and a rather persistent high pressure ridge to the east caused by the Atlantic Ocean. The combination of high pressure to the east and low pressure to the west and northwest provides a strong pressure gradient (another meteorologist term referring to the difference in pressure across a distance) across south Texas much of the spring. In addition, the coastline is more parallel to the typical wind direction south of Corpus Christi. This allows for very warm temperatures across the brush country and Deep South Texas to exist near much cooler temperatures over the Gulf of Mexico. This difference in temperature increases the pressure gradient even further and provides a strong sea breeze that begins along the coast and works inland each afternoon.

Interestingly, early in the spring, the same cool gulf waters that help provide windy conditions across south Texas actually help limit wind speeds across the near-shore waters and bays. During the winter, the water temperatures in the bays and nearshore areas cool into the 50s and we even saw some brief upper 40s this year due to the very cold winter which much of the country experienced. These cold waters typically extend 30-60 miles offshore (a solid 60 miles this year). Water temperatures further offshore cool also, but generally remain in the 70s as they are more removed from the influence of cold land based airmasses. The cold waters near the coast tend to limit wind speeds, especially when the winds are blowing

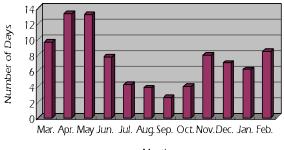
onshore from the gulf. Early in the spring, it is not uncommon to see wind speeds of 20 to 30 mph over offshore areas and over the coastal plains while winds remain 10 to 15 mph along area beaches. This is directly related to atmospheric instability, which refers to the rate at which temperatures decrease with height, where the faster the decrease the more unstable the atmosphere is. You have probably noticed that winds where you live are typically strongest during the afternoon or evening when temperatures are warm, but decrease overnight when temperatures cool. This is because heating the earth's surface leads to higher instability, while cooling temperatures at the ground leads to more stable conditions. Temperatures over the gulf are much more strongly influence by the water below than the sun and the water does not

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Ave Number of Days w/ SCA Port Aransas (1999-2004)



Ave Number of Days w/ SCA Baffin Bay 1999-2004



Month

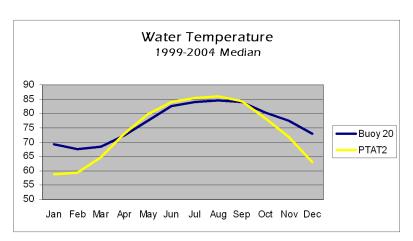


MARINER'S PORT CONT.

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warm or cool much in a day's time. So while winds increase significantly during the day, then decrease again overnight across land areas, they are much steadier over the ocean but also much lower during the daytime hours when the water remains cold.

In the late spring and summer water temperatures warm and this stable condition along the coast no longer exists. This lends itself to higher wind speeds over the Gulf waters as low pressure systems continue to pass north of the area and it leads to more small craft advisories in May and early June than any other time of year.



ODDS & ENDS



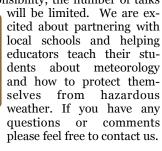
Above: NWS Warning Coordination Meteorologist John Metz speak to students at a Corpus Christi Elementary School.

NWS Can Visit Your School

By Roger Gass—Forecaster / Education Outreach Coordinator

The mission of the National Weather Service is to protect life and property and one way we here at the Weather Forecast Office in Corpus Christi accomplish this task is through outreach to our local schools.

We offer schools many types of informational brochures on weather safety, as well as visits from on staff meteorologists who can give talks to students about weather and weather safety. If you would like to schedule a talk for your school, you can contact Roger Gass via e-mail at roger.gass@noaa.gov or by phone at (361) 289-0959. However, due to limited staff and the large numbers of schools in our area of responsibility, the number of talks







SOUTH TEXAS SNAPSHOTS

DO YOU HAVE ANY COOL SOUTH TEXAS WEATHER PHOTOS THAT YOU WOULD LIKE TO SHARE IN OUR NEXT NEWSLETTER? SEND THEM OUR WAY!

EMAIL PHOTOS TO JASON.RUNYEN@NOAA.GOV

Left: Steam plume rising into stratus deck of clouds east of Robstown. Smoke and steam plumes rising into cloud bases can easily be mistaken for tornadoes. (Photo courtesy of KIII TV viewer)

Left: A rainbow is caught in the open blue sky over Corpus Christi. Small, almost invisible, raindrops were still left in the sky to form the rainbow, after the parent cloud had just dissipated. (Photo taken by Jason Runyen)

Left: Towering cumulus cloud at sunrise over the Gulf of Mexico. (Photo taken by Jason Runyen)



STAFF SPOTLIGHT

New Observations Program Leader: Douglas Vouglesang

Douglas Vogelsang is the new Observing Program Leader in Corpus Christi, Texas. Doug has been employed with the NWS since 1994, and recently transferred to Corpus Christi from Memphis, Tennessee. Other locations that Doug has lived while working for the NWS are Great Falls, Montana, Cold Bay, Alaska, and Huron, South Dakota. Prior to his hiring with the NWS, Doug served five years in the United States Navy as a weather forecaster and observer while being stationed in Naples, Italy, and Roosevelt Roads, Puerto Rico.

Doug grew up along the Southern California coast in the awesome harbor town of Dana Point. He enjoys surfing, skiing, boating, fishing, baseball and tornado chasing. So moving to the coastal city of Corpus Christi will allow him to again pursue some of those activities he relished during his youth. In addition, Doug enjoys working with children, and has coached wrestling and baseball teams, as well as serving as a substitute teacher on his off time. His two boys keep him quite active, as he usually volunteers himself to assist with school outings and activities, while at the same time attending their baseball and soccer games.





New Meteorologist Intern: Matthew Grantham

Matt is a southern boy, born and raised in the East Alabama town of Phenix City. His interest in weather began at the age of 5, after the landfall of Hurricane Andrew in 1992. After the hurricane, he took a trip to South Florida to visit his father who was sent to the area to supervise telephone repairs. He can recall finding The Weather Channel on TV shortly after returning home. Matt gives credit to The Weather Channel for strengthening his interest in meteorology. A couple of notable first-hand weather experiences also helped him develop a love for Mother Nature. He remembers the Superstorm of March 1993, and Hurricane Opal in 1995. These events produced major impacts that he will never forget.

At the age of 11, Matt became a weather watcher for WTVM, a local station in Columbus, GA. His parents still maintain a weather station and send in daily reports. He convinced his parents to take a storm chasing vacation in June 2000. With few resources and little information, Matt and his parents saw their first funnel cloud near Wichita, Kansas. They were all instantly hooked on storm chasing. Every year since then, Matt and his parents have enjoyed storm chasing vacations in the Plains. They have observed more than 15 tornadoes including several strong to

violent ones. While he was in school for meteorology at the University of South Alabama, Matt positioned himself in the path of Hurricane Gustav and Hurricane Ike. Witnessing the raw power of tornadoes and hurricanes has given him a better appreciation for high-impact weather events.

As a senior meteorology student, Matt was fortunate enough to receive a SCEP position at the National Weather Service in Birmingham, Alabama. After graduating from the University of South Alabama in December 2009, he accepted a Meteorologist Intern position at the National Weather Service in Corpus Christi.

Although he lives and breathes weather, Matt also enjoys bowling, golfing, fishing, and playing poker.



STAFF SPOTLIGHT

New Forecaster: Andrew Kennedy

Andrew Kennedy has traveled from the Deep South to the freezing North and back over the past couple of years in the National Weather Service. Andrew started his volunteer work for the National Weather Service in Tampa, FL, in the summer of 2008. Andrew enjoyed kayaking and camping while in central Florida. In the fall 2008, he received an Intern position in the Upper Peninsula of Michigan, where he became a Yooper. Andrew enjoyed downhill skiing, learning cribbage, and surviving over 380 inches of snow in the two winters spent at Marquette. After driving over 1750 miles, Andrew joined the National Weather Service Forecast Office in Corpus Christi in March 2010 as a General Forecaster.



NWS Corpus Christi's Roger Gass Promoted to Forecaster

NWS Corpus Christi meteorologist intern Roger Gass was promoted to Journeyman Forecaster this late winter. Gass holds a Bachelor of Science degree in meteorology from Texas A &M and has served South Texas residents for 2 1/2 years. Prior to joining the NWS family in Corpus Christi, Roger worked as a TV meteorologist at KSAN in San Angelo, TX. Roger is an active member of the staff at the Corpus Christi Weather Forecast Office, serving on several office teams including the Graphicast and Multimedia Team. Gass has also made significant contributions as a member of the office's diversity, COOP, NWSChat, and StormReady teams as well as the Texas Hurricane Guide.

Forecasters Katie Roussy and Jim Reynolds Depart to NWS WFO Raleigh, NC and NWS CWSU Albuquerque, NM

Katie Roussy, one of our forecasters at the National Weather Service in Corpus Christi, was selected as a forecaster in Raleigh, North Carolina. Katie came on board to the NWS in Corpus Christi in September 2006 as a meteorological intern and was promoted on station to a forecaster. During her time in Corpus Christi, Katie was very active in office outreach, serving as the Education Coordinator. She also was a strong contributor to the office Diversity and Hydrology programs. Katie was also the program leader for the NOAA Weather Radio. While at WFO Raleigh, Katie will serve as the aviation focal point and participate in office outreach activities. She hopes to build upon the foundation that she built while in Corpus Christi.

Jim Reynolds, one of our forecasters at the National Weather Service in Corpus Christi, was selected as the Meteorologist In Charge (MIC) at the Central Weather Service Unit (CWSU) in Albuquerque. Jim came on board at NWS Corpus Christi in May 2007. Jim has had many numerous adventures in the National Weather Service, including San Diego, El Paso, Medford, OR, and Hastings, NE. During his time in Corpus Christi, Jim was active in the office Skywarn and StormReady Program. Jim was also a one of our leaders for the office's Graphicast and Multimedia Web Services Program. Jim worked with TXDOT on a collaborative Weather Radio project. Jim's goal as the MIC at the CWSU is to keep the flying public safe. He knows very well how critical safety is in the realms of aviation, being a pilot himself. Jim's goal involves continuing our agency's strong relationship with FAA by providing critical weather information for our nation's airspace with collaborative enroute flight advisory services.

Congratulations to both Katie and Jim!

www.weather.gov/corpuschristi

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